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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* THOMAS HERBERT PETERSON

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Appeal 2009-011952  
Application 10/660,825  
Technology Center 3700

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Before WILLIAM F. PATE, III, JOHN C. KERINS, and  
MICHAEL W. O'NEILL, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown in the PTOL-90A cover letter attached to this decision.

### STATEMENT OF THE CASE

Thomas Herbert Peterson (Appellant) seeks our review under 35 U.S.C. § 134 of the Examiner's:

(1) objections to claims 2, 3, and 7-13, and 22 for certain informalities;<sup>2</sup>

(2) final rejection of claims 1, 4, and 6 under 35 U.S.C. § 102(b) as anticipated by Kami (U.S. Patent No. 5,339,799, issued Aug. 23, 1994); and

(3) final rejection of claims 2, 3, 5, and 7-23 under 35 U.S.C. § 103(a) as unpatentable over Kami.

We have jurisdiction under 35 U.S.C. § 6(b). We REVERSE.

#### *The Invention*

The claimed invention is to a medical instrument for use in an image guided surgery system and a method of navigating a medical instrument.

Claims 1, 7 and 14, reproduced below, with emphasis added, are representative of the subject matter on appeal.

1. A medical instrument for use in an image guided surgery system, comprising:  
a support member operatively connected to a flexible engaging member having an operative distal tip; and  
a strain gauge affixed to an outer portion of said flexible engaging member, *wherein said strain gauge detects movement of said operative distal tip of said flexible engaging member.*

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<sup>2</sup> We have cursorily reviewed the Examiner's objections. The Examiner's objections could colorably be construed as 35 U.S.C. § 112, second paragraph, rejections since they appear to go to the merits of the claims rather than form. Accordingly, we do not consider the Examiner's objections to be proper.

7. An image guided surgery system, comprising:
- a medical instrument having a flexible engaging member operatively connected to a support member, said flexible engaging member having a deflectable operative distal tip;
  - at least one of an electromagnetic, optical, inertial position, and ultrasound tracking system configured to track said medical instrument; and
  - a deflection tracking system configured to track said flexible engaging member of said medical instrument, said deflection tracking system comprising at least one strain gauge affixed to an outer portion of said flexible engaging member *in order to detect movement of said deflectable operative distal tip.*
14. A method of navigating a medical instrument having a flexible engaging member having an operative distal tip, the method comprising:
- tracking the medical instrument with a first position tracking method that tracks a proximal end of the medical instrument; and
  - using a second tracking method to track movement of the operative distal tip of the medical instrument, wherein said using comprises affixing a strain gauge on an outer portion of the operative distal tip of the medical instrument *in order to detect movement of the operative distal tip.*

## DISCUSSION

### *Issue*

In light of Appellant's contentions and the Examiner's positions, the issue before us is as follows:

Did the Examiner err in finding that Kami's strain gauge detects movement of the operative distal tip of the flexible engaging member to anticipate claims 1, 4, and 6 under 35 U.S.C. § 102(b) and render obvious claims 2, 3, 5, and 7-23 under 35 U.S.C. §103(a)?

### *Analysis*

Appellant contends that "Kami simply does not describe, teach or suggest that the strain gauge 121 is used to detect movement of the laser probe 122." App. Br. 13. Rather, Appellant contends that Kami's pressure sensors 125u, 125d, 125l, and 125r are used to detect whether a contact direction is up, down, left, or right, and the strain gauge 121 is used to detect a pressure working when the laser probe 122 is placed on a tissue. *Id.* Appellant also contends that the Examiner has not clearly established that it is necessarily present in Kami that the laser probe must inherently move in order to make contact with tissue and that such movement is detected by a strain gauge. App. Br. 15. Therefore, Appellant contends that there is no basis in fact and/or technical reasoning to support the Examiner's statements regarding inherency. Instead, Appellant contends that the Examiner merely summarily concludes that the tip must inherently move in order to make contact with the tissue and thus, detection constitutes detection of movement. *Id.*

The Examiner's position is that Kami's fourth embodiment as shown in Figure 18 discloses a medical instrument including a support member

(protective sheath 123 of Kami) operatively connected to a flexible engaging member (laser probe 122 of Kami) having a operative distal tip and a strain gauge (strain gauge 121 of Kami) affixed to the outer portion. Ans. 3. The Examiner also posits that “the strain gauge detects movement of the operative distal tip of the laser probe” and points to Figure 18, and column 12, line 62 through column 13, line 5; column 13, lines 24-28; column 28, lines 39-67; and column 29, lines 1-14. *Id.* In response to Appellant’s argument that Kami’s strain gauge does not detect movement of the laser probe as required by claims 1, 7, and 14, the Examiner argues, as follows:

When the reference strain gauge detects contact with the patient, as clearly set forth by Kami ('799) (col. 13 lines 24-39), the reference does in fact detect movement of the probe. In other words, prior to insertion into the patient, the strain gauge of Kami ('799) detects no pressure; when the probe is inserted into the patient, the gauge detects the contact direction, and such detection of contact constitutes detection of movement, as the gauge would only detect contact if the probe had moved from being outside the patient to inside the patient. Furthermore, even after insertion, the reference strain gauge continuously detects the pressure; as such, while the probe is being moved within the patient, detecting a change in the pressure inherently constitutes detecting movement of the probe, as the pressure can only change when the probe is moved. Accordingly, the previous rejection of claim 1 is proper.

Ans. 5.

Kami’s fourth embodiment, as shown in Figs. 18-20, discloses a treatment section of the distal portion of a laser probe 122 in a therapeutic

system. Col. 12, ll. 59-61. The distal end of the laser probe 122 extends through a protective sheath 123 and the proximal end of the laser probe 122 is connected to a guide cable which in turn is connected to a laser unit 124. Col. 12, ll. 62-65. A laser beam from the laser unit 124 is emitted from the distal end of the laser probe 122 to cauterize the accreted region of the liver and cholecyst. Col. 12, ll. 65-68. Pressure sensors 125u, 125d, 125l, and 125r are installed inside the tip of the sheath 123 in order to detect whether the contact direction of the tip is up, down, left, or right. Col. 13, ll. 1-4. A strain gauge 121 is installed on the laser probe 122 in order to detect the pressure working when the laser probe 122 is placed on tissue. Col. 13, ll. 4-6.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. §§ 102 or 103. “The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness.” *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995). The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *See In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82 (CCPA 1981). “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in

the thing described in the reference, and that it would be so recognized by persons of ordinary skill.’ ‘Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted). “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990).

We agree with Appellant that the Examiner has not established that it is inherent that the tip of the laser probe 122 of Kami must move in order to make contact with tissue so that detection constitutes movement. Indeed, Appellant argues, and the Examiner has not refuted, that all the Kami reference discloses is detection of pressure. Detection of pressure does not require physical movement.

Moreover, if the laser probe does not move, but remains stationary and instead the patient moves into contact with the laser probe, the laser probe will still detect the pressure from the contact of the patient with the laser probe. Thus, the Examiner’s inherency argument is refuted because in the case of the patient moving into the laser probe, detection would not be equated to the movement of the laser probe as the Examiner suggests is necessarily the case. In other words, the missing descriptive material (i.e., the strain gauge detecting movement of the operative distal tip) is not necessarily present in the Kami reference as is required for inherent anticipation. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002) (quoting *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir.



1999) (“Inherent anticipation requires that the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present, in the prior art.”).

In view of the foregoing, we do not sustain the Examiner’s rejection of claims 1, 4, and 6 under 35 U.S.C. § 102(b) as anticipated by Kami. Since the Examiner relies on the same finding of inherency in rejecting claims 2, 3, 5, and 7-23, we do not sustain the Examiner’s rejection of claims 2, 3, 5, and 7-23 under 35 U.S.C. § 103(a) as unpatentable over Kami.

#### CONCLUSION

The Examiner erred in finding that Kami’s strain gauge detects movement of the operative distal tip of the flexible engaging member.

#### DECISION

We reverse the Examiner’s rejections of claims 1, 4, and 6 under 35 U.S.C. § 102(b) as anticipated by Kami and of claims 2, 3, 5, and 7-23 under 35 U.S.C. § 103(a) as unpatentable over Kami.

#### REVERSED

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